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An analysis of varying levels of achievement attained by pupils from rural communities in a consolidated high school.

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AN ANALYSIS OF VARYING LEVELS OF ACHIEVEMENT
ATTAINED BY PUPILS FROM RURAL COMMUNITIES
IN A CONSOLIDATED HIGH SCHOOL

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AN ANALYSIS OF VARYING LEVELS OF ACHIEVEMENT ATTAINED BY
PUPILS FROM RURAL COMMUNITIES IN A
CONSOLIDATED HIGH SCHOOL

BY

JOHN E. DEADY

A problem submitted in partial fulfillment
of the requirements for the Master of
Science Degree

University of Massachusetts

1950

TABLE OF CONTENTS

1850

1850

1850

1850

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	111
LIST OF TABLES AND CHARTS	v
CHAPTER I - - <u>INTRODUCTION</u>	1
Transportation Problem	1
Pupil Differences	1
Goal of Consolidated High School	2
CHAPTER II - - <u>THE PROBLEM AND THE MEANS TO THE SOLUTION</u>	5
Outline of Problem	5
General Procedure	5
CHAPTER III - - <u>TABULAR COMPILATION OF DATA</u>	8
Purpose of Data	8
Sources of Data	8
CHAPTER IV - - <u>ANALYSIS OF RESEARCH</u>	24
Reasonable Expectations	24
Outstanding Deviations	27
Percentage Differences	30
CHAPTER V - - <u>INTERPRETATION OF RESEARCH</u>	35
Logical Expectations	35
Factual Results	35
Digest of Conclusions	38
CHAPTER VI - - <u>RESTATEMENT OF THE PROBLEM, CONCLUSIONS, LIMITATIONS</u>	41
Varied Elementary Preparation	41
Possible Restrictions	42
Purpose of Problem	44

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LIST OF TABLES AND CHARTS

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LIST OF TABLES AND GRAPHS

Page

TABLE I	- - The total number of students examined from <u>Community A</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	9
TABLE II	- - The total number of students examined from <u>Community B</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	10
TABLE III	- - The total number of students examined from <u>Community C</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	11
TABLE IV	- - The total number of students examined from <u>Community D</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	12
TABLE V	- - The total number of students examined from <u>Community E</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	13

TABLE VI	- - The total number of students examined from <u>Community F</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	14
TABLE VII	- - The total number of students examined from <u>Community G</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	15
TABLE VIII	- - The total number of students examined from <u>Community H</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	16
TABLE IX	- - The total number of students examined from <u>Community J</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	17
TABLE X	- - The total number of students examined from <u>Community K</u> ; the number of A's, B's, C's and D's and F's compiled in the subjects of English Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	18

TABLE XI	- -	The total number of students examined from <u>Community L</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	19
TABLE XII	- -	The total number of students examined from <u>Community M</u> ; the number of A's, B's, C's, D's and F's compiled in the subjects of English, Math and General Science over a four year period; and the average numerical grade over the four year period in each subject	20
TABLE XIII	- -	Synthesis of initial research as to communities	21
GRAPH XIV	- -	The ranking of tested communities as to I. Q. shown in graphic form	25
GRAPH XV	- -	A graphic representation of the average grades obtained by the tested students in English, Math, and General Science	26
GRAPH XVI	- -	A graphic representation showing the percentage of pupils from each of the examined communities receiving A's, B's, C's and F's in English	28
GRAPH XVII	- -	A graphic representation showing the percentage of pupils from each of the examined communities receiving A's, B's, C's and F's in Math	29
GRAPH XVIII	- -	A graphic representation showing the percentage of pupils from each of the examined communities receiving A's, B's, C's and F's in General Science	31

	Page
TABLE XIX - - A comparison of the communi- ties compiling the best records in English, Math and Science with those communities compiling the poorest records	36
TABLE XX - - A comparison of the highest and lowest tested communities with regard to I. Q.	37

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CHAPTER I
INTRODUCTION

CHAPTER I

INTRODUCTION

The consolidated high school is faced with a multitude of problems not encountered by the high school of a centralized community. It is the duty of the administration to weld a heterogeneous mass of students taken from a number of communities, each with its peculiar industries, cultural, religious and social backgrounds, into a synchronized machine.

Laymen are seldom prone to analyze and appreciate the problems inherent in the organization of the consolidated high school. They fail to recognize the myriad hazards and pitfalls which befall the administration. Certainly the difficulties are numerous enough when the students come from one community. When they come from twelve different ones, the hazards are multiplied a thousandfold.

Transportation Problem - - One has but to consider the transportation of students by bus to and from school each day to gain a perspective as to the magnitude of the task. Some students arrive early and stay late while others arrive just in time to start school and leave before the last bell has rung. Neither circumstance is conducive to an excellent rapport between the students and faculty, and offers little incentive for concerted effort.

Pupil Differences - - Looking for a moment at the individual pupils one discovers that each is a distinct personality shaped by his environment. Since progressive teaching

demands that the individual personality be reckoned with, it becomes necessary for the administration and faculty to study carefully the community from which each pupil comes, the predominant nationalities, the major ways of making a living, the political forces in power, the various pressure groups at work on the populace, favorite entertainment indulged in by the citizens, clubs and organizations to which the pupils or their parents belong and finally, the differences in elementary education.

It is the duty of all well-informed citizens to realize that the aforementioned determiners of pupil action are inextricably woven together in each pupil.

Goal Of Consolidated High School - - It is the accepted obligation of the consolidated high school to furnish all pupils, regardless of their background or place of residence, a sound education in the precepts of democratic living, and to prepare them in the best way possible for the future, whether it be a college education, office work, farming or working at a trade. It is beyond the reach of the administration of Windham High School, Willimantic, Connecticut, to go into the personal backgrounds of all the students who enter its portals: it would be neither expeditious nor practical. The high school cannot create the environment in which prospective students shall be raised. Its only duty is to be cognizant of the different environments. It can, however, take

some action to determine the caliber of elementary preparation received by students from the surrounding towns. It is with such action that this problem is concerned.

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CHAPTER II

THE PROBLEM AND THE MEANS TO THE SOLUTION

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THE PROBLEM AND THE MEANS TO THE SOLUTION

This problem is concerned with elementary school preparation of pupils in rural towns and how the variety in preparation affects pupil progress and status in a consolidated high school.

Outline Of Problem - - It is the purpose of this problem to show that the caliber of teaching in the elementary schools sending pupils to Windham High School, Willimantic, Connecticut, from eleven surrounding towns is not standardized, that certain towns are failing to offer their adolescents the proper training in the basic subjects of English, Math and General Science, thus causing the students to compile poorer records in these subjects when competing with equally capable, or less capable, students.

It will also attempt to discover if certain towns consistently have the brightest children and whether or not these children maintain the best academic standings in the basic subjects.

General Procedure - - A separate list of all pupils attending Windham High School from each of the eleven towns examined was compiled along with a list of pupils who attended the M school, the public elementary school in the city of Willimantic. This list was broken down by classes. Then the average Intelligence Quotient for each community was calculated from school records. Each pupil having taken the Otis

Group Intelligence test before entering High School. From these figures the average Intelligence Quotient for the school was determined.

From school records the marks obtained by each pupil in the subjects of English, Math and General Science during his freshman year were compiled. For each community it was determined how many pupils received A's, B's, C's, D's and F's in each of the basic subjects under consideration. These figures were determined for each class first and then added together. Since numerical grades were given in the school records, the average numerical grade for each subject was then calculated by town and the percentage of pupils receiving each mark was calculated for each community. Next the average I. Q.'s and average grades were summarized on one chart according to community and the statistical data compiled was carefully graphed and tabled so as to be easily examined and interpreted by those who might have an interest in the subject under discussion.

Finally, the data was studied and evaluated by the writer in an attempt to show that certain communities are lacking in a sound program in the basic subjects and that a great discrepancy exists between the different towns both as to intellect and quality of work produced by the students.

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CHAPTER III

TABULAR COMPILATION OF DATA

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On the following pages are recorded, according to town, the total number of pupils examined, the average I.Q., the number of A's, B's, C's, D's and F's compiled in each subject according to class, the average numerical grade obtained in each subject over a four-year period, and finally, a percentage breakdown of all grades compiled.

Purpose of Data - - The statistical information appearing on the following pages cannot in itself be used to prove any contentions of the author. It does, however, give an insight into the communities studied, the number of pupils examined from each, and furnishes the facts necessary for the analysis appearing at a later point in this problem.

Sources Of Data - - The data was obtained from the Cumulative Record Card Files of Windham High School, Willimantic, Connecticut. The scholastic averages used were the final grades as compiled by the students of the classes of 1950, 1951 and 1952. The grades used for the class of 1953 were figured from their records through mid-year examinations of February, 1950. I. Q. marks were taken from private school records. These scores are available to teachers and administrators only.

Table I

Community A

Course - ENGLISH

Total Number of Pupils Examined - 36

Average I. Q. - 101

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	0	0	1	2	6
B	3	5	5	3	16	44
C	2	4	4	8	18	50
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 80

Course - MATH

Number of pupils taking Math - 34

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	0	1	3
B	3	5	2	4	14	41
C	4	4	4	6	18	53
D	0	0	0	0	0	0
F	0	0	0	1	1	3

Average numerical grade over a four year period 78

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 33

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	2	1	3	9
B	4	3	3	3	13	39
C	3	5	3	5	16	49
D	0	0	0	1	1	3
F	0	0	0	0	0	0

Average numerical grade over a four year period 79

Table II

Community B

Course - ENGLISH

Total number of pupils examined - 27

Average I. Q. - 100

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	1	0	2	4	15
B	0	2	2	2	6	22
C	3	5	2	6	16	59
D	1	0	0	0	1	4
F	0	0	0	0	0	0

Average numerical grade over a four year period 77

Course - MATH

Number of pupils taking Math - 17

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	1	1	6
B	0	4	2	2	8	47
C	2	0	1	4	7	41
D	0	0	0	0	0	0
F	1	0	0	0	1	6

Average numerical grade over a four year period 78

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 23

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	1	2	8
B	2	3	1	3	9	38
C	2	4	1	4	11	46
D	0	0	0	0	0	0
F	1	1	0	0	2	8

Average numerical grade over a four year period 78

Table III

Community C

Course - ENGLISH

Total number of pupils examined - 29

Average I. Q. - 99

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	0	0	1	4
B	1	5	1	3	10	34
C	3	2	4	5	14	48
D	0	0	0	3	3	10
F	0	0	0	1	1	4

Average numerical grade over a four year period 79

Course - MATH

Number of pupils taking Math - 24

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	0	0	1	4
B	1	2	1	4	8	33
C	3	5	4	2	14	59
D	0	0	0	1	1	4
F	0	0	0	0	0	0

Average numerical grade over a four year period 77

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 28

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	0	0	0
B	1	3	1	3	8	29
C	3	5	3	8	19	68
D	0	0	0	0	0	0
F	0	0	0	1	1	3

Average numerical grade over a four year period 75

Table IV

Community D

Course - ENGLISH

Total number of pupils examined - 34

Average I. Q. - 106

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	2	0	0	2	6
B	7	4	3	6	20	59
C	4	2	1	5	12	35
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 61

Course - MATH

Number of pupils taking Math - 34

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	0	0	1	3
B	3	7	3	6	19	56
C	7	0	1	5	13	38
D	0	0	0	0	0	0
F	1	0	0	0	1	3

Average numerical grade over a four year period 80

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 26

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	0	0	1	2	8
B	5	3	0	3	8	31
C	5	2	2	7	16	61
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 79

Table V

Community E

Course - ENGLISH

Total number of pupils examined - 73

Average I. Q. - 102

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	2	3	6	8
B	4	15	7	9	35	48
C	2	6	11	8	27	37
D	0	0	0	3	3	4
F	0	0	0	2	2	3

Average numerical grade over a four year period 72

Course - MATH

Number of pupils taking Math - 64

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	2	4	7	11
B	2	8	7	9	26	41
C	4	8	11	7	30	47
D	0	0	0	1	1	1
F	0	0	0	0	0	0

Average numerical grade over a four year period 79

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 49

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	2	3	6
B	1	4	4	7	16	33
C	5	8	8	7	28	57
D	0	0	0	1	1	2
F	0	1	0	0	1	2

Average numerical grade over a four year period 77

Table VI

Community F

Course - ENGLISH

Total number of pupils examined - 9

Average I. Q. - 105

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	0	0	0
B	1	0	2	1	4	44
C	0	0	2	3	5	56
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 78

Course - MATH

Number of pupils taking Math - 8

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	0	0	0
B	0	0	2	1	3	38
C	1	0	1	3	5	62
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 75

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 9

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	1	1	12
B	0	0	2	2	4	44
C	1	0	2	1	4	44
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 61

Table VII

Community C

Course - ENGLISH

Total number of pupils examined - 26

Average I. Q. - 98

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	0	1	3
B	4	1	3	2	10	38
C	3	5	2	1	13	50
D	0	0	0	0	0	0
F	0	1	1	0	2	9

Average numerical grade over a four year period 76

Course - MATH

Number of pupils taking Math - 22

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	0	1	4
B	3	1	1	2	7	32
C	3	6	3	2	14	64
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 78

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 21

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	1	0	2	9
B	2	0	1	3	6	28
C	5	4	3	1	13	63
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 79

Table VIII

Community N

Course - ENGLISH Total number of pupils examined - 44

Average I. G. - 104

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	1	1	1	4	10
B	2	5	0	9	19	43
C	0	6	5	6	17	39
D	0	0	0	3	3	6
F	0	0	0	1	1	2

Average numerical grade over a four year period 79

Course - MATH Number of pupils taking Math - 36

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	0	1	4	6	16
B	2	9	1	6	18	50
C	0	3	2	7	12	34
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 82

Course - GENERAL SCIENCE Number of pupils taking
General Science - 39

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	2	0	4	6	15
B	3	6	0	7	16	41
C	0	5	5	6	16	41
D	0	0	0	0	0	0
F	0	0	0	1	1	3

Average numerical grade over a four year period 78

Table IX

Community J

Course - ENGLISH

Total number of pupils examined - 138

Average I. Q. - 105

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	2	3	2	4	11	8
B	12	13	22	22	69	50
C	9	14	10	16	49	35
D	0	0	0	6	6	4
F	0	0	2	1	3	3

Average numerical grade over a four year period 81

Course - MATH

Number of pupils taking Math - 126

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	4	4	5	7	20	15
B	9	12	17	18	56	44
C	10	13	12	10	45	35
D	0	0	0	4	4	4
F	0	0	0	1	1	2

Average numerical grade over a four year period 82

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 124

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	4	1	4	12	21	18
B	5	8	13	12	48	38
C	9	16	8	19	52	40
D	0	0	0	2	2	3
F	0	0	0	1	1	1

Average numerical grade over a four year period 80

Table X

Community K

Course - ENGLISH

Total number of pupils examined - 22

Average I. Q. - 108

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	0	0	0	0
B	4	3	2	1	10	45
C	0	4	4	2	0	55
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 79

Course - MATH

Number of pupils taking Math - 17

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	0	0	0	1	6
B	2	4	0	1	7	32
C	1	0	5	2	8	56
D	0	0	0	0	0	0
F	0	0	1	0	1	6

Average numerical grade over a four year period 78

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 17

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	1	0	0	0	1	6
B	2	3	1	2	8	46
C	1	2	4	1	8	46
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 80

Table XI

Community L

Course - ENGLISH

Total number of pupils examined - 47

Average I. Q. - 98

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	2	0	2	5
B	4	5	5	9	23	48
C	9	4	4	4	21	44
D	0	0	0	0	0	0
F	0	0	0	1	1	3

Average numerical grade over a four year period 79

Course - MATH

Number of pupils taking Math - 41

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	0	1	0	1	3
B	2	3	6	7	18	43
C	7	5	3	5	20	48
D	0	0	0	0	0	0
F	1	0	1	0	2	6

Average numerical grade over a four year period 78

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 36

<u>Marks</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	0	1	4	1	6	16
B	4	3	2	1	10	27
C	8	4	2	6	20	57
D	0	0	0	0	0	0
F	0	0	0	0	0	0

Average numerical grade over a four year period 80

Table XII

Community M

Course - ENGLISH

Total number of pupils examined - 139

Average I. Q. - 100

<u>Mark</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	8	4	1	3	16	12
B	19	20	15	14	68	48
C	9	9	21	15	54	39
D	0	0	0	0	0	0
F	0	0	1	1	2	1

Average numerical grade over a four year period 82

Course - MATH

Number of pupils taking Math - 130

<u>Mark</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	2	3	1	1	7	5
B	14	11	8	13	46	35
C	18	17	26	11	71	55
D	0	0	0	1	1	1
F	2	0	0	3	5	4

Average numerical grade over a four year period 76

Course - GENERAL SCIENCE

Number of pupils taking
General Science - 102

<u>Mark</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>Total</u>	<u>%</u>
A	3	0	3	0	6	6
B	9	12	11	6	38	37
C	16	11	21	18	66	65
D	0	0	0	1	1	1
F	1	0	0	0	1	1

Average numerical grade over a four year period 80

Table XIII is a synthesis of the data appearing on the previous pages. Each town is listed along with its average I. Q. over a four year period, and average scholastic grade attained in each of the basic subjects of English, Math and General Science. The differences between the average I. Q.'s of the various communities becomes apparent in this table as do the variations in marks.

The statistical data appearing hereon is the basis for the graphs shown in the following chapter, and is that with which the author substantiates the majority of his contentions.

Table XIII

Town	Average I. Q.	Course	Average Grade
A	101	English	80
		Math	79
		Science	79
B	100	English	77
		Math	78
		Science	78
C	99	English	79
		Math	77
		Science	75
D	106	English	81
		Math	80
		Science	79
E	102	English	79
		Math	79
		Science	77

Table XIII Continued

Town	Average I. Q.	Course	Average Grade
F	105	English	78
		Math	78
		Science	81
G	98	English	76
		Math	78
		Science	79
H	104	English	79
		Math	82
		Science	78
J	105	English	81
		Math	82
		Science	80
K	108	English	79
		Math	78
		Science	80
L	98	English	79
		Math	78
		Science	80
M	100	English	82
		Math	76
		Science	80

CHAPTER IV

ANALYSIS OF RESEARCH

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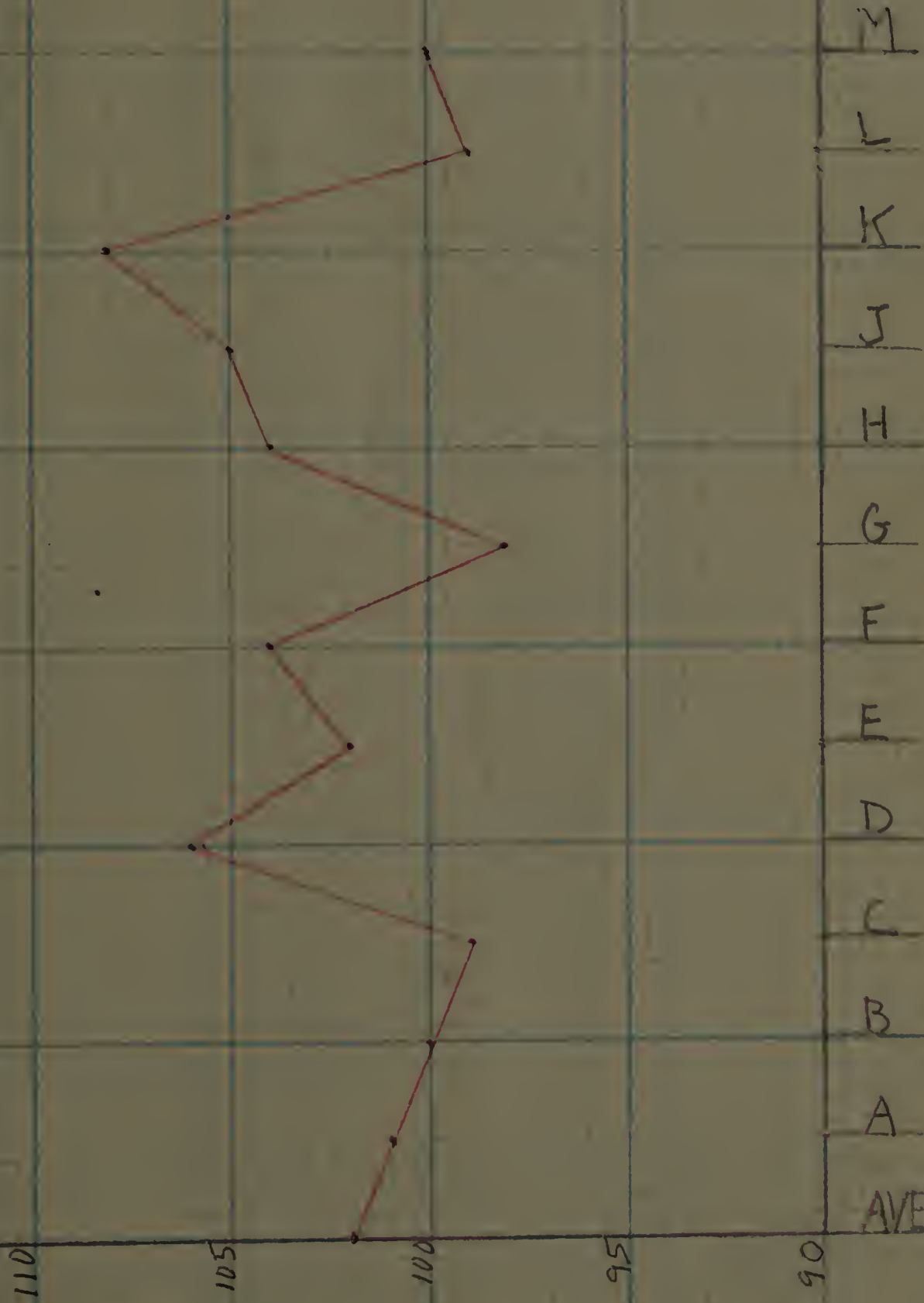
CHAPTER IV

ANALYSIS OF RESEARCH

The initial effort of the author was to determine the average intelligence of the students entering Windham High School from each of the eleven surrounding communities and the M school, the public elementary school for the city of Willimantic. This information compiled from pupil records may be studied in Graph XIV (page 25). It may be seen that of the twelve separate groups under consideration there is an I.Q. differences of ten points from the highest to the lowest. The town of G compiled an average I.Q. of 98 over a period of four years, while the town of K with an average of 108 led the group. It was interesting to note that a few classes from different towns selected at random showed remarkably high I. Q. averages, but when the four classes were added together from any town there was only the small discrepancy of ten points between the highest and the lowest average compiled.

Reasonable Expectations - - It is safe to assume that if these figures are accurate to a reasonable degree, and if the elementary school preparation has been consistent in each of the surrounding communities, the towns of K, D, F and J should compile the highest averages in all courses studied at Windham High School. The towns of G, L and C should do the poorest work.

With these facts in mind it is necessary to examine the achievement of pupils from the various towns in the basic



TOWN

GRAPH XIV

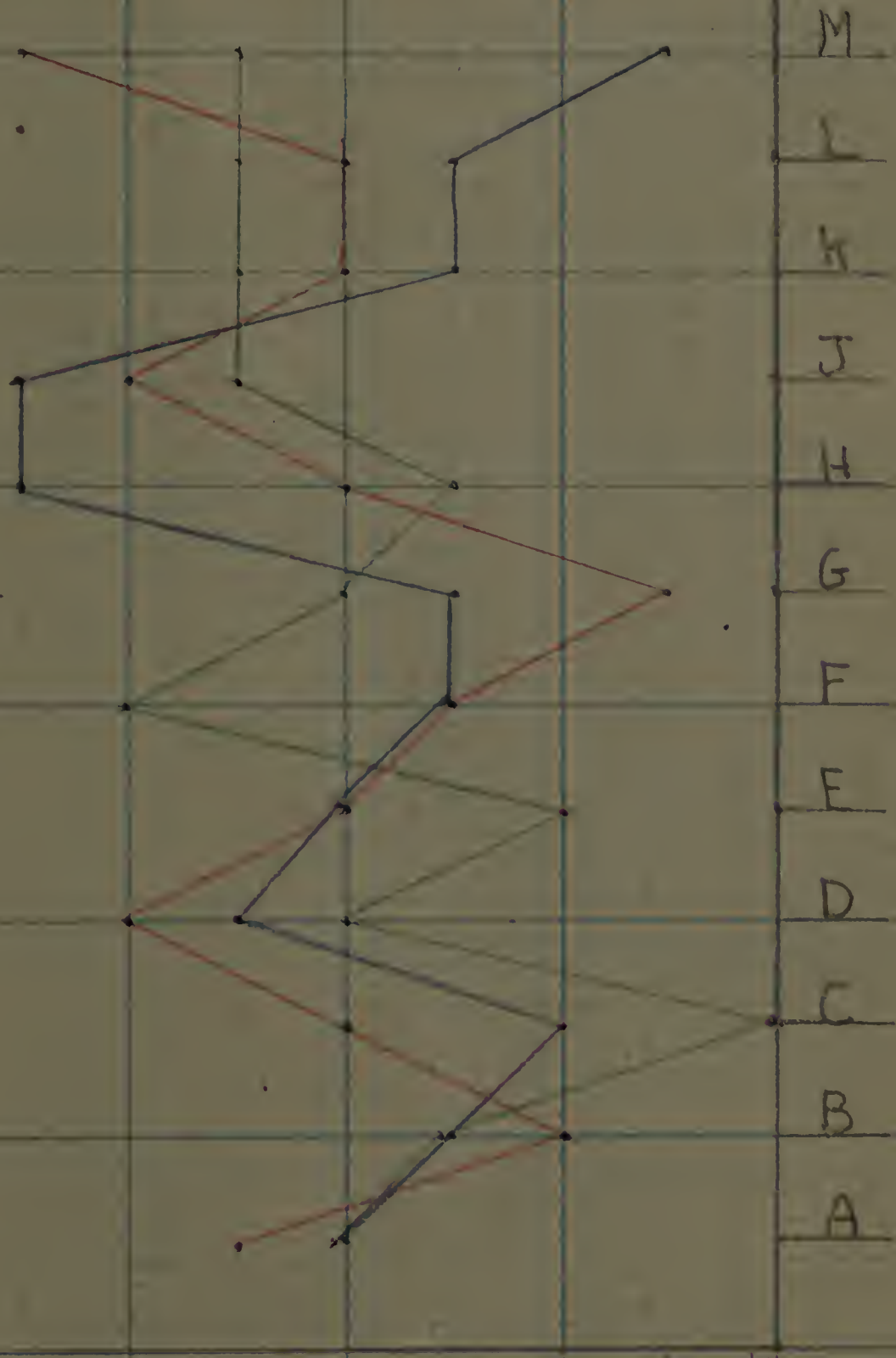
AVERAGE

IQ

KEY

- = AVERAGE ENGLISH SCORE
- = AVERAGE MATH SCORE
- = AVERAGE GENERAL SCIENCE SCORE

85
84
83
82
81
80
79
78
77
76
75



MARK

TOWN

GRAPH XV

subjects of English, Math and General Science. Graph XV (page 26).

The reader will note that there is a relatively consistent pattern of achievement shown here. That is, in general, the towns standing high in one subject will also stand high in the rest. There are, however, certain outstanding deviations which should be examined.

The town of C, while compiling an average I.Q. of only 99 (school average 102) did relatively well in English with an average of seventy-eight per cent, but fell to seventy-five in General Science and seventy-seven in Math. While these students would not be expected to stand at the top of the list, they would likewise not be expected to do as badly as they did.

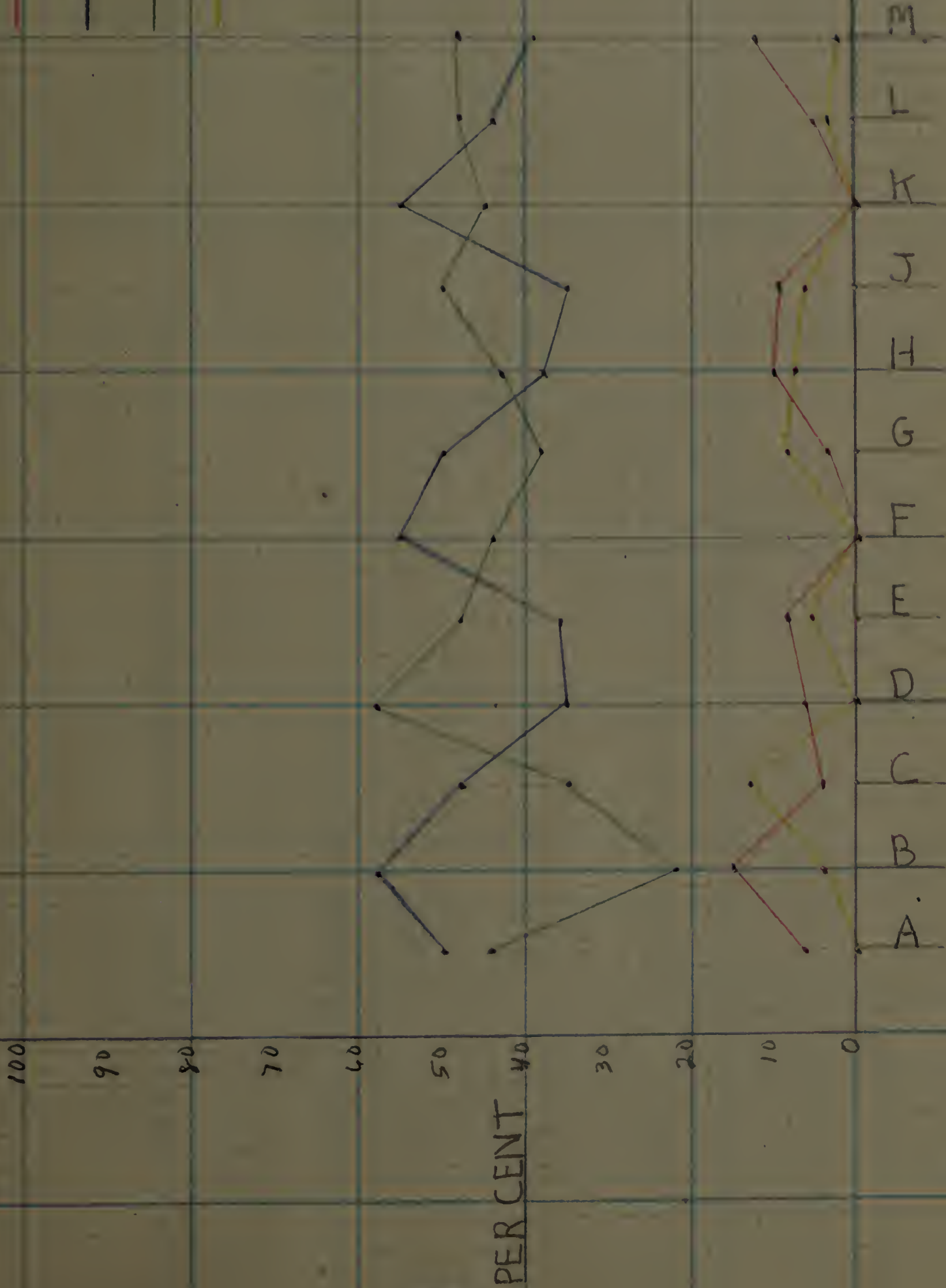
The town of H while compiling very average records in English and General Science stood at the top of the list in the study of Math.

Outstanding Deviations - - Probably the most outstanding deviation belongs to M school from Willimantic proper. While leading the field in the study of English, and maintaining an eighty average in General Science, the school average in Math dropped to seventy-six to put them on the very bottom of the list in the study of Math. If the reader will look back to page 20, he will see that the M classes of 1950 and 1951 did extremely well in all subjects but the classes of 1952 and 1953 have dropped miserably in everything. The cause of the rapid

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ENGLISH

- KEY
- = % OF PUPILS RECEIVING A'S
 - = % OF PUPILS RECEIVING B'S
 - = % OF PUPILS RECEIVING C'S
 - = % OF PUPILS RECEIVING F'S



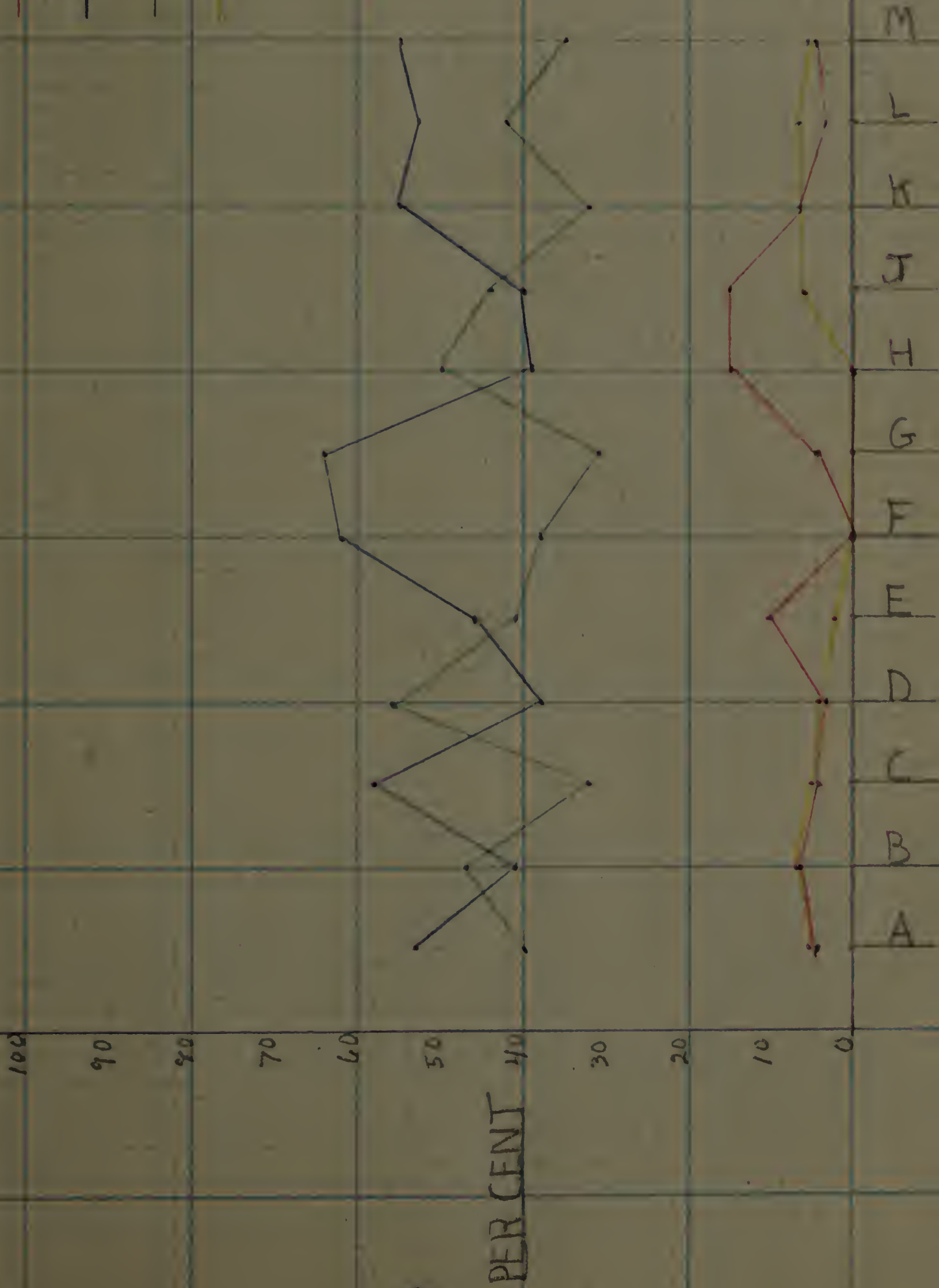
TOWN

GRAPH XVI

MATH

KEY

- = % OF PUPILS RECEIVING A'S
- = % OF PUPILS RECEIVING B'S
- = % OF PUPILS RECEIVING C'S
- = % OF PUPILS RECEIVING D'S
- = % OF PUPILS RECEIVING E'S
- = % OF PUPILS RECEIVING F'S



TOWN

GRAPH XVII

deterioration is not known to the author but the facts are evident.

As might be expected the towns of C and G did relatively poorly in all three subjects, with the latter town at the bottom of the tested communities in English. L on the other hand stands well up in the middle of the graph showing that in spite of a low average I.Q., the students have consistently done better in their courses than some other more naturally endowed students.

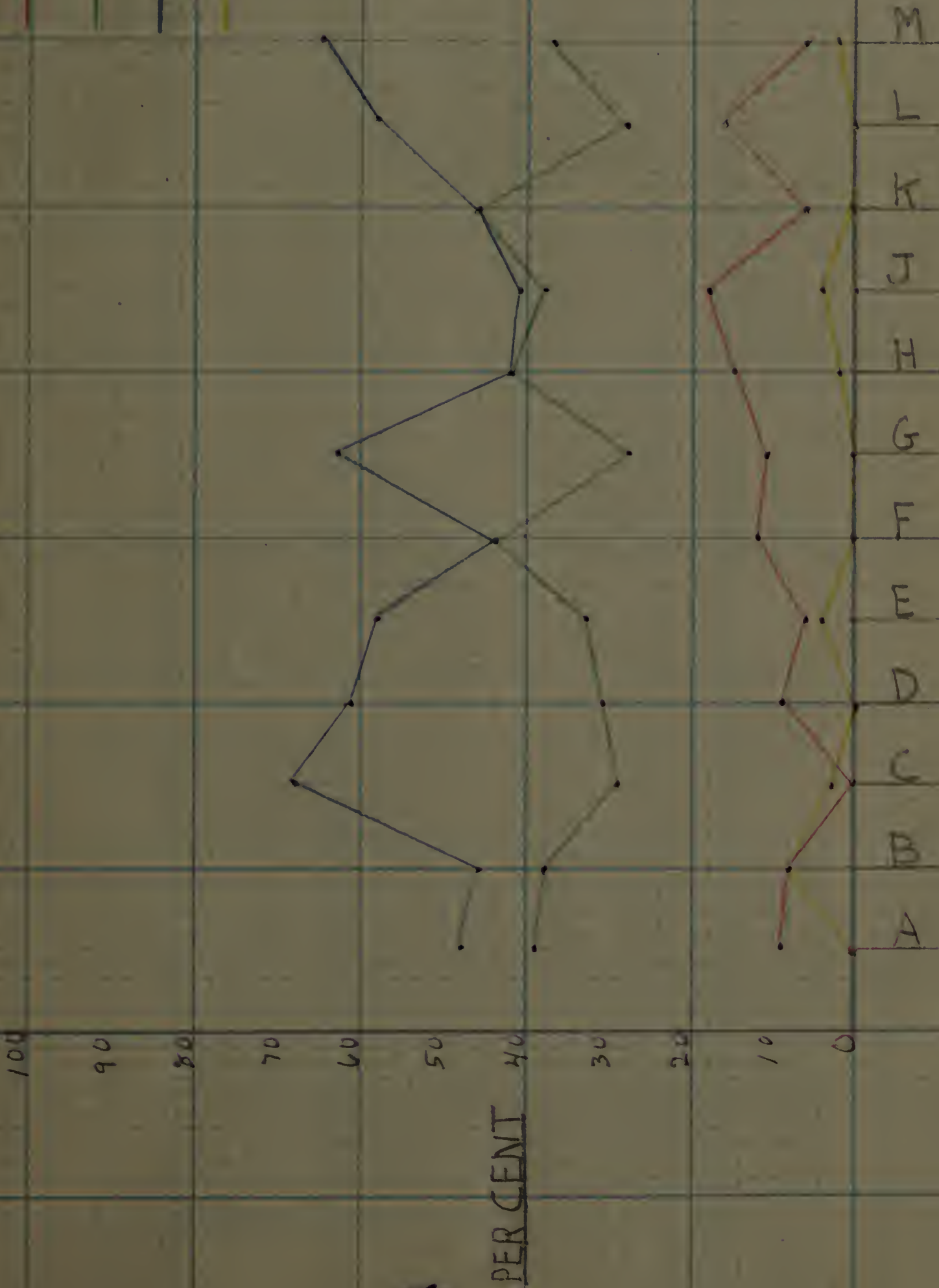
The town of K, with an average I.Q. of 108, compiled the exact same record in all subjects as did L with an I. Q. average of 98. D and J consistently showed up better in all subjects while H was outstanding only in the study of Math. F, a town with an average I.Q. of 105, was mediocre in both English and Math but led the entire list in the study of General Science.

Percentage Differences - - The over-all averages compiled in each subject by the students from the different towns give a picture of the way the marks ran. It is interesting, however, to see how the percentage of each mark obtained by the different towns varies.

In the study of English (Graph XVI, page 28) B, which compiled an over-all average of only seventy-seven, led the list with 15% A's. There were, however, about 58% of all the students with an average in the C bracket which pulled the average down considerably. M, which led the list with an average of

GENERAL SCIENCE

KEY
 — = % OF PUPILS RECEIVING A'S
 — = % OF PUPILS RECEIVING B'S
 — = % OF PUPILS RECEIVING C'S
 — = % OF PUPILS RECEIVING F'S



TOWN

GRAPH XVIII

eighty-two, had 12% A's and 48% B's, while D and J, the other towns high in the study of English, scored only 6% and 8% A's respectively. As might be expected, the towns of C, L and G scored under 5% in A's. It is interesting that F, with an average I. Q. of 105, had not a single A pupil.

In the study of Math (Graph XVII, page 29), H and J which stood at the top of the list had 16% of A pupils, while D, which ranked next, had only 3% A's but made up the difference with 56% B's. A compiled approximately the same type of record. E which compiled an over-all mediocre average of seventy-nine had 11% A's. F which failed to have any A pupils in English, also failed to have any in Math and ended up with a poor average mark of seventy-eight. M which compiled the poorest average in Math had only 5% A's and 55% C's. The C's were generally of a low variety, thus causing the low average.

In the study of General Science (Graph XVIII, page 31) it is interesting to note that in no town did the percentage of B pupils exceed the number of C pupils. This was not the case in the study of English and Math where several towns had better than 50% of their pupils doing B work. J, as usual, had a high percentage of A pupils (18%). F, which ranked the highest with an average of 81%, had only 12% A's, but made up the difference with a good number of B and high C students. These facts are not apparent on the charts however. L, which ranked very low on the I.Q. grades, had 16% of A pupils but also had a large number of high C pupils.

The results indicated in Graphs XVI, XVII and XVIII run parallel to those on Graph XV. In the few cases noted in the preceding paragraphs, abnormal percentages in certain grades have been brought to the attention of the reader. In most cases a large portion of A pupils will indicate that the native intelligence of these students is high enough to offset any poor teaching, hence there will be a large number of A pupils anyway. Such is true in the towns of J and H. It is difficult to explain, however, how the town of L has such a high percentage of A pupils in General Science, and B a high percentage of A pupils in English, unless the instruction in those communities is above average in those subjects. It is likewise true that in K, D and F there should be a high percentage of A pupils. This does not happen to be the case. They actually have a poorer percentage of A pupils than do G, L and M which rank well below them on the I.Q. rating scale. It can be assumed, therefore, that perhaps K, D and F are not giving sufficient training to their pupils to guarantee their getting A's in high school. An examination of the individual community tables, reveal that many of the towns have pupils who are in the high B scale but who never quite reach the A bracket. These facts are corroborative evidence to the writer's hypothesis.

CHAPTER V

INTERPRETATION OF RESEARCH

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CHAPTER V

INTERPRETATION OF RESEARCH

It is now necessary to attempt an interpretation of the material which has been gathered and discussed in the previous chapter. Because of the great number of examined communities, it will be necessary to analyze only those cases where some valid evidence to support the author's contentions appear.

Logical Expectations - - Listed in Table XIX (page 36) are the communities having the best four year averages in English, Math and General Science. Beside these top communities are listed those which have done the poorest in each of the three subjects over the observed period. If all environmental circumstances were equal (which, of course, they are not) it can be logically expected that the towns from which the students have the highest I.Q. will be on top, while those with the lowest I.Q. will be on the bottom in the respective order as they stand on the I.Q. scale. (See Graph XIV, page 25) We shall see that this is not true in all cases.

Factual Results - - In the study of English the towns of K, F and H do not appear among the top towns. J and D which also rank high on the I.Q. scale are well up in the study of English. F on the other hand is one of the very lowest in spite of its average I.Q. of 105. The towns of G, B and C rank low as might be expected. Strangely enough, M of Willimantic, while having only an average I.Q. of 100, was the top school.

Table XIX

ENGLISH

High Towns

- 1. M
- 2. J
- 3. D
- 4. A

Low Towns

- 1. G
- 2. B
- 3. F
- 4. C

MATH

High Towns

- 1. J
- 2. H
- 3. D
- 4. A

Low Towns

- 1. M
- 2. C
- 3. F
- 4. G

SCIENCE

High Towns

- 1. P
- 2. J
- 3. K
- 4. L

Low Towns

- 1. C
- 2. E
- 3. B
- 4. H

Table XI

I. Q.

<u>High Towns</u>	<u>Low Towns</u>
1. X	1. G
2. D	2. L
3. J	3. C
4. F	4. B
5. K	5. M

In the study of Math, again J, D and H led the list as they should. A, which is just average, was also among the top towns. Again F and K failed to be among the leaders and V appears again among the very lowest. H which was on top in English is at the bottom in Math.

In the study of General Science, J, the only town to be represented in the top group for each subject is accompanied by X and F. It must be noted that neither has appeared at the top before. The explanation seems to be that very few of the schools have had adequate training in General Science and the native intelligence of the pupils from these communities carries them to the top of the list. L which has an I.Q. average of 98 joins this top group. From investigation it was revealed that they have been subjected to some sort of training in General Science before.

Digest Of Conclusions:

1. F (I. Q. 105) was extremely low in English and Math but stood on top in General Science.
2. H (I. Q. 104) did poorly in General Science but stood very high in Math.
3. G (I. Q. 98) was the poorest community intellectually of all those examined. As expected, it stood very low in all subjects, but did best in General Science. These pupils have had a smattering of this latter course before.
4. L (I. Q. 98) stands well up in the study of General Science and does not fall particularly low in Math and English. This would indicate that the students are quite well prepared for high school by the elementary schools of the community.
5. C (I. Q. 99) is consistently poor in all subjects, but its students are more intellectually endowed than those from L and G. Observations, backed by these statistics, indicate that the pupils from this community fail to get the desired elementary school training.
6. M (I. Q. 100) stood at the top of the group in English, lowest in Math and just in the middle in General Science. It should be noted that in the last two years the scholastic achievements of the pupils from this school have been decreasing steadily. This consistent trend, particularly in Math and Science, seems to indicate a teaching deficiency in these fields.

7. E (I. Q. 102) possesses the average intellect of the group, is average in English and Math, but falls particularly low in the study of General Science.
8. L (I. Q. 105) was the consistently best community examined. Much of this standing is due to the large number of faculty children from the University of Connecticut. If these children were separated from the rest of the group, the achievement from this community would be much lower.
9. K (I. Q. 108) although having the highest I. Q., ranked consistently at the bottom with regard to achievement.
10. Adequate General Science training in most towns seems to be lacking.

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CHAPTER VI

RESTATEMENT OF PROBLEM, CONCLUSIONS, LIMITATIONS

CHAPTER VI

RESTATEMENT OF THE PROBLEM, CONCLUSIONS, LIMITATIONS

It has been the purpose of the author to discover, if possible, which of the towns sending pupils into Windham High School, Willimantic, Connecticut are failing to offer their children adequate training in the basic subjects of English, Math and General Science, thus causing the children to fall behind when in competition with equally gifted students from other communities. From the statistical data compiled, and the subsequent tabulating, graphing and analyzing of same, it is the opinion of the author that certain definite points to support his original hypothesis are evident.

Varied Elementary Preparation - - As far as can be determined statistically, the towns of K, F and C are furnishing elementary training which is not on a level with that furnished by some other communities. The towns of J, D, R and A are doing the best work in elementary school preparation. It would be useless repetition to go over all the facts leading to these conclusions since they are evident in the preceding chapter.

These conclusions have been reached because these communities, although they have compiled high intelligence ratings, have consistently failed to rank towards the top in achievement when compared with pupils from other communities.

Specifically it can be said that H pupils did very poorly in General Science, F pupils were lower in Math and English, L pupils did very well in all subjects in spite of their poor I. Q.

scores, C rated consistently poor in all subjects, M was excellent in English but the poorest of all in Math, E was very poor in General Science, and K was at the bottom in achievement in Math and English. Since the pupils are all normal American adolescents with basically the same problems and interests, it would appear as though these variations in pupil achievement were due chiefly to the caliber of elementary training received in the respective communities.

In this study, it was the experience of the author that there were a hundred and one blind alleys into which he was innocently drawn before finding out that they led to no concrete conclusions. Because of the results of the plan finally decided upon, however, he feels far wiser and more competent to deal with any problem such as this should he encounter one similar to it in the future.

Possible Restrictions - - There are many limitations to this problem. The writer had to use as a basis of pupil achievement the marks obtained in the basic subjects while Freshmen in Windham High School. While achievement tests would have been more valid, it is true that the marks were given over a period of four years by the same teachers. It cannot be denied that subjectivity in marking was always present. This is apparent in Windham High School as elsewhere. It is not the custom to fail pupils at Windham who try their best. Consequently, only the marks of A, B and C were used in this analysis. The writer feels that these marks are quite fair, and that if many pupils were

passed with a flat seventy the average would soon go down for any community. Because of this subjective marking, the variation in grades is relatively small on the average when compared with the average I. Q. grades taken from the Otis Group Intelligence Test. Although the variation in the average grades is small, the author feels certain that they are indicative of the relative standings the students have with each other, and that these differences would be even more pronounced, but in the same directions, should standardized achievement tests be given to the entire group.

It is impossible to weigh the effects of travel on the pupils from the various towns, or to know how many changes in elementary school teachers the pupils in these communities have been subjected to. It is quite evident, however, that the smaller the community, the more likely the preparation of the pupils will be of a lower caliber. It is also apparent that pupils who come from the outlying sections can do just as well as those students coming from Willimantic proper, or from some of the larger "feeling" communities if they have the proper elementary training!

Certain outstanding discrepancies became evident during this study. For example, that students from the M Grammar School of Willimantic are doing poorer work each year, yet L sends in a group which has a better achievement record than their I. Q. score would ever indicate.

It is true that for many of the towns the statistics were too overlapping and contradictory to be conclusive. For this reason the author attempted to prove his hypothesis by isolating only the top four and the bottom four communities out of the twelve communities under scrutiny. It was his original contention that some communities were failing to offer students adequate preparation for High School, and in light of the statistical data compiled and interpreted on the preceding pages, he still maintains this belief.

Purpose Of Problem - - This paper, it is hoped, will give statistical evidence to the often suspected theory that certain communities do fail to adequately prepare their children for high school work. The problem is nebulous and difficult to attack, but certain discrepancies definitely exist as are shown on preceding chapters. While the evidence is not too sharply established in certain instances, the reader must not forget that this has been a problem dealing with people, communities, schools and personalities. As long as these factors exist there will be exceptions and some results will be confusing and over-lapping.

This paper is not meant to settle all arguments on the aforementioned theory of inadequate elementary school preparation. It is hoped, however, that it will shed a ray of light on the problem at Winchen High School and will be of some aid in the future for the planning of courses and divisions, and

for the answering of questions concerning the scholastic achievement records compiled by each town in relation to the other towns who send pupils to the high school in Willimantic, Connecticut.

WILLIMANTIC
SOUTH WINDHAM
MAY 19 1950

Approved by:

William B. Rourke

D. Justin McCarthy
Problem Committee

Date:

May 24, 1950

